



Operating Instructions

for air supplied half-mask respirator sets

SATA® air star C™



Prior to Operating read Operating Instructions Carefully !

SATA-Air Supplied Respirator with continuous air flow:
Half-Mask Part. No. 137547
or alternative
Half-Mask Part. No. 137745

Any modification of the respirator system or mask, belt unit, air hoses etc., combination with other products or with spare parts of other products by SATA or other manufacturers affects the safe operation of the respirator, may lead to serious harm to the user health, permanent harm or loss of life may follow and is in no way permissible. Serious danger to health, permanent harm or even loss of life may follow if insufficient compressed air is used for breathing (Respect applicable rules of the resp. country).



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General Features

SATA Breathing Masks represent very efficient health protection for painters and those who perform similar jobs involving environmental hazards to health.

Half-Mask **Part. No. 137547** consists of: ventilated half-mask Part. No. 137653 and belt unit with charcoal filter Part. No. 37192, Figure 1

Caution and Limitations

The compressed air supplied to the belt unit has to be of Grade "D" air quality. Grade "D" air quality is an air quality standard established by the ANSI / Compressed Gas Association (CGA G-1.1 Grade D), defining the quality of breathable air. Breathable Grade "D" air must contain the amount of oxygen normally included in atmospheric air of 19.5 - 23.5 % oxygen for synthesized air. The content of hydrocarbon, if any, must be less than 5 mg per cubic meter of air; carbon monoxide is not allowed to surpass 10 ppm, and carbon dioxide should not exceed 1,000 ppm.

Attention:

The SATA respirator may only be used when the air pressure gauge needle on the cleaning units points to the green segment. In case the needle drops into the red section, the air inlet pressure to the belt unit must be increased, or the adjustment valve at the cleaning unit has to be opened up, so that the gauge needle points to the green gauge section. Reduce the air supply in case the gauge needle is above the green section.

Operating the respirator with the gauge needle out of the green area will cause health problems and might lead, in extreme cases, to death.

or alternative

Half-Mask **Part. No. 137745** consists of:

ventilated half-mask Part. No. 137653 and belt unit without charcoal filter Part. No. 138362 Figure 2 in connection with a combination filter with charcoal unit i.e. SATA combination filter unit 494 Part. No. 92338.

The user does not inhale the contaminated air or dust, but is provided with compressed and cleaned breathing air.

working
area



1. SATA-RESPIRATOR HALF-MASK

1.1 Explanation to illustration

- | | |
|---|---|
| A Fresh Air supply | F Quick coupling for connection of breathing mask |
| B SATA air filter 444 with reduction valve or alternative SATA combination filter 494 | G Air hose for breathing mask |
| C Air hose to belt unit | H Air supplied half-mask |
| D Charcoal adsorber with replacable filter cartridge | I Belt unit without charcoal filter |
| E Regulator valve for breathing air | T see additional SATA manual |

Figure 1

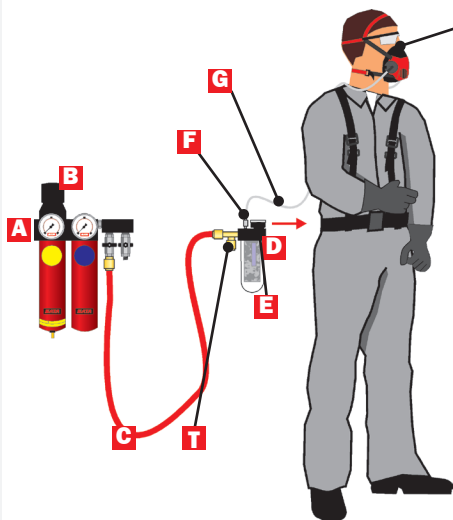
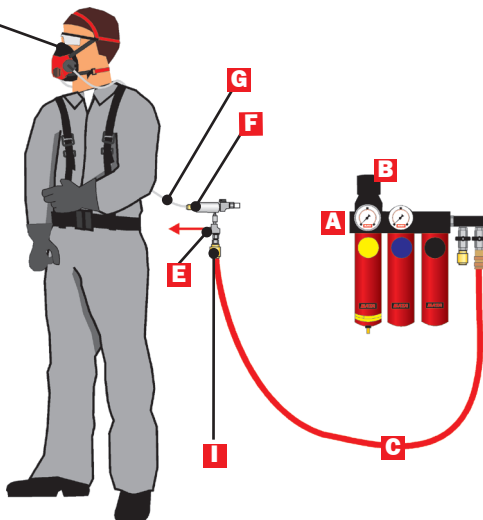


Figure 2



Operating Instructions for air supplied half-mask respirator sets

1.2 S-Special or Critical User's instructions:

Technical Data

Maximum air pressure allowed	87 psi	6 bar
Minimum air pressure required	60 psi	4 bar

For the belt unit with activated charcoal adsorber:

Air passage in Half-Mask

1,0 bar (15 psi)	160 l/min (5.6 cfm)
2,8 bar (43 psi)	380 l/min (13.4 cfm)

Maximum allowed working pressure for adsorber glass	218 psi	(15 bar)
Maximum working temperature allowed	140 °F	60 °C
Weight of complete adsorber unit with belt	21 oz	(596 g)
Weight of complete half-mask	6 oz	(185 g)
Maximum length of the air hose	50 ft	
Minimum diameter of the air hose	9.5 mm	

For alternative version without charcoal adsorber

Length of hose	Air passage in Half-Mask			
	(4 bar) off	60 psi on	(6 bar) off	87 psi on
3/8 in. dia.				
7,6 m	130 l/min	250 l/min	195 l/min	358 l/min
25,0 ft	4,6 cfm	8,8 cfm	6,8 cfm	12,6 cfm
10,7 m	127 l/min	245 l/min	187 l/min	360 l/min
35,0 ft	4,5 cfm	8,6 cfm	6,6 cfm	12,7 cfm
15,2 m	125 l/min	240 l/min	185 l/min	360 l/min
50,0 ft	4,4 cfm	8,5 cfm	6,5 cfm	12,7 cfm

Maximum working pressure of air feeding hose(C)	290 psi	(20 bar)
Bursting pressure of air feeding hose (C)	1450psi	(100 bar)
Maximum working temperature allowed	140 °F	60 °C
Weight of complete regulating unit with belt	9 oz	(260 g)
Weight of complete half-mask	6 oz	(185 g)

1.3 Standard equipment Version

Ventilated half-mask with adjustable continuous fresh-air supply. Body of mask made of natural rubber with anatomically formed sealing frame and matching nose seating. Built-in exhausting valve. Complete charcoal activated adsorber with control valve and waist belt. All disconnectable parts are fitted with quick couplings. Operating mode of breathing air cleaning see point 3.

1.4 Alternative equipment Version

Half-mask, see point 1.3, an adjustable waist belt with regulating unit without charcoal adsorber. All disconnectable parts are fitted with quick couplings. Operating mode of breathing air cleaning see point 3.

2. Putting into Service

The SATA half mask serve for protection of respiration and lungs. For this reason, the breathing mask must be supplied with air from technical unobjectable air lines (Grade D). If necessary, a good basic quality of compressed air can be obtained by using high quality air cleaners. See point 3.

Attention: Make sure at all times that the primed compressed air is not contaminated by environmental factors such as exhaust gas from internal combustion engines, heating systems etc.

First put on the waist-belt with activated charcoal filter unit (D) (figure 1) or alternatively the waist-belt with regulating unit (I) (figure 2). Then connect air hose (C). Adjust air pressure between 60 - 87 psi (4 - 6 bar). Put on half mask (H) with air hose for mask (G), then connect waist part (F). By means of regulator valve (E) the desired quantity of breathing air can be adjusted.

The SATA respirator may only be used when the air pressure gauge needle on the cleaning units points to the green segment.

3. Operating mode of activated charcoal adsorber on the belt unit or of wall mounted filter 464

The service life of the activated charcoal filter cartridge depends mainly on the initial cleaning of the air supplied. Therefore we suggest the use of a high quality air cleaner with discharge of condensate, i.e. SATA filter 444.

For cleaning of breathing air, an activated charcoal filter is employed, on the belt unit or wall-mounted, warranting an almost 100 % oil removal. Exchange the activated charcoal cartridge every three months. Stick the attached label to the protection basket of the adsorber to assure that cartridge is exchanged in due time. To remove protection basket, unscrew plastic adsorber glass, and remove old cartridge by new cartridge. With the 464 wall mounted charcoal filter unit use the special wrench provided to loosen the tube and replace the cartridge. Reassemble in reverse order. The belt mounted filter unit and also the wall-mounted charcoal filter are only auxiliary filters. The provision of clean respirable air (Grade D) to the inlet of the air supply hose is absolutely necessary and required by NIOSH.

The adjustable air valve behind the filter unit is constructed in such a manner that by a pressure of 87 psi (6 bar) the breathing mask is supplied with less than 15 cfm (425 l/min.) of purified air.

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By clockwise turning the regulation screw at position "H" (see functional scheme), the flow of air can be restricted to more than 4 cfm at 60 psi (4 bar) (115 l/min) - be sure the air pressure gauge needle on the cleaning unit points to the green segment. The charcoal is packed in sealed packages and may be stored for five years. Charcoal in opened packages is durable for a maximum of six months.

4. Putting on the mask

- (1) Pull the loops of the holder frame to the end of the bands. Pass the lower bands through completely until the loops of holder frame are next to the mask cap of the half-mask body.
- (2) Pull the lower bands and the respirator hose over the head.
- (3) Put mask over mouth and nose, then put the holder frame onto the back of the head, passing the holder frame above the ears.
- (4) Pull the strap ends until the half-mask is firmly applied to the face. Adjust upper and lower bands, if necessary readjust the bands until the half-mask fits comfortably and firmly onto the face.



Pic 1



Pic 2



Pic 3



Pic 4

5. MAINTENANCE, CARE AND STORAGE

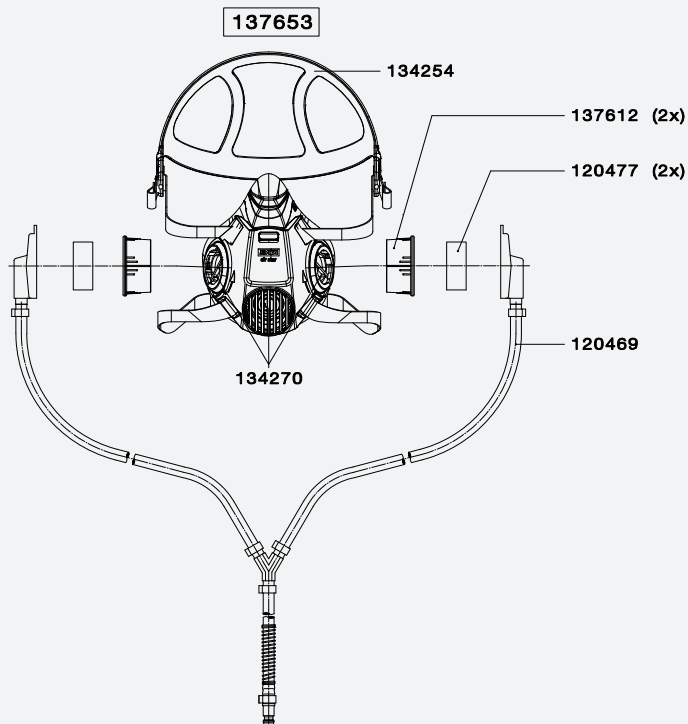
- After using the unit, clean and disinfect it, and check to see if it is operating properly and is free of leaks (briefly immerse the adsorber unit, with pressure supply connected and in operational state, into clear water).
- Check the level of oil saturation of the filter cartridge.
- Check the regulator valve for freedom of movement.
- Check the gauge if it works properly and is not damaged.
- Check whether the compressed air filter and pressure gauge are functioning properly. If necessary, clean the porous-bronze filter and replace the fine filter cartridge (see Operating Instructions of SATA Air Filter).
- After use, clean the half-mask thoroughly to remove sweat and breath condensate from the inside. Do this using the SATA cleaning wipes for breathing masks, or any soft cloth. Cleaning wipes are supplied in a pack of 10, Part. No.134965.
- Disinfect the half-mask at regular intervals (daily, weekly when used every day, and every 6 months if unit is not packed airtight). If more than one person use the half-mask, disinfect the mask each time before the next person uses it. We suggest to purchase an extra half-mask for each operator. As disinfectant we recommend "Incidur" by Messrs. Henkel.
- The unit must be cleaned and checked over (operational and leak test) at the latest after 6 months.
- When not using the unit, keep in a clean and dry place.
- Replace the inlet and outlet valve washers after a period of no longer than 2 years.

6. SPARE PARTS AS FOLLOWING DRAWINGS

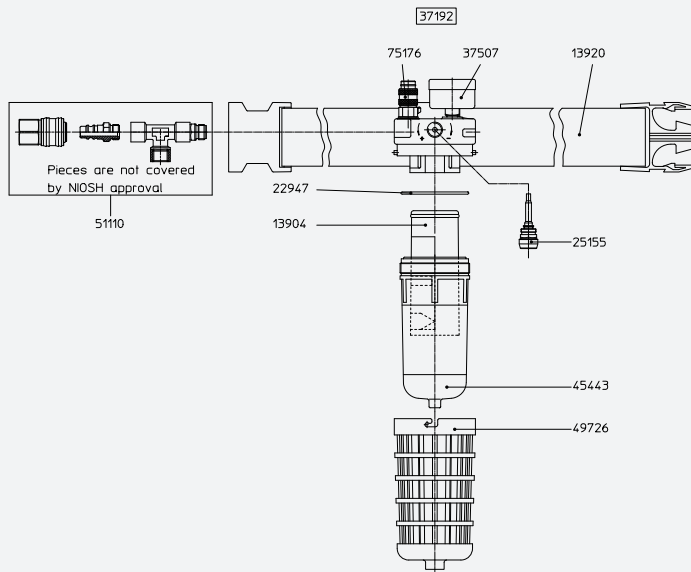
6.1 Spare Parts Air Supplied Respirator with continuous air flow Half-mask Part. No. 137547 or alternative Half-mask Part. No. 137745

Part No.	Nomenclature
120469	Compressed air hose mask, cpl.
120477	Air distributor (pack of 2 pcs.)
134254	Head strap with head fixation and Yoke
134270	Pack of 5 pieces exhalation diaphragms and 10 pieces inhalation diaphragms
137612	Connection piece (pack of 2 pcs.)
137653	Half-mask alone with air hose, without filter unit

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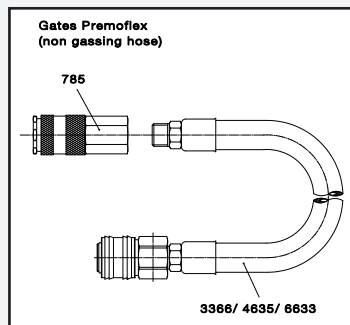
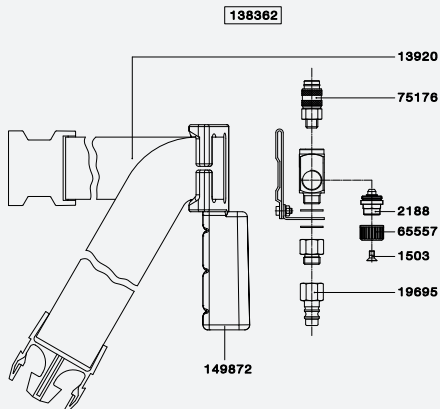
Part. No.	Nomenclature	25155	Spindle complete
3366	Safety air hose length 25'	37192	Waist belt, cpl.
4635	Safety air hose length 35'	37507	Gauge
6633	Safety air hose length 50'	45443	Adsorber glass, cpl.
13904	Filter cartridge	49726	Protection basket
13912 USA	Complete air cleaning unit with belt 13920	51110	T-piece
	Waist belt	75176	Safety quick coupling
22947	O-ring 54x2,5		



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6.3 Spare Parts for Air Regulating Unit for SATA Ventilated Respirator Half-Mask Part. No. 137745

Part. No.	Nomenclature	13920	Waist belt
1503	Countersunk screw M 4 x 8 DIN 799	19695	Nipple for milton air-coupling
2188	Spindle complete	65557	Control knob
3366	Safety air hose length 25'	75176	Safety quick coupling
4635	Safety air hose length 35'	138362	Complete air regulating unit with belt
6633	Safety air hose length 50'	149872	Belt cushion



7. ACCESSORIES FOR SATA VENTILATED RESPIRATORS HALF MASK

- SATA-Combination Fine Filter Unit 444 , Part. No. 92296
- SATA-Combination Filter Unit 484 , Part. No. 92320 (Filter Unit 484 consists of Filter Unit 444 and Charcoal Filter Unit 464)
- SATA Replacement Charcoal Filter Cartridge Part. No. 13904 for Belt Unit
- SATA Replacement Charcoal Filter Chartridge Part. No. 85373 for SATA filter 484
- Gates-Premo-Flex Approved Safety Air Hose 3205-0025
- Hose with length of 25' Part. No. 3366
- Hose with length of 35' Part. No. 4635
- Hose with length of 50' Part. No. 6633
- SATA top air Part. No. 89086

8. IMPORTANT SUGGESTIONS FOR THE USE OF SATA BREATHING SET Part. No. 137547 AND Part. No. 137745 HALF-MASK

Follow applicable regulatory standards pertaining to safe use of air compressors for Type 1 Grade D Breathing Air.

The compressed air from the compressor must be prepared for respiration in such a manner that

- a) water, oil, fumes and dust (Particles) as well as
 - b) flavouring agents and odours
- are safely eliminated.

For this purpose we recommend the SATA filter 444 or alternatively the SATA Combination Filter Unit 484 . This filter is also equipped with an atmospheric pressure control unit.

Not for use in atmospheres immediately dangerous to life or health. Not for use in atmospheres containing less than 19,5 % oxygen.

The final quality improvement of the breathing air is performed by the activated charcoal filter installed on the waist-belt of SATA-Breathing-Masks or in the wall-mounted filter 464 (164).

The air supply hoses used for the belt unit without charcoal adsorber must be especially approved. We recommend to use the same quality of the air hose for use with the belt unit with charcoal adsorber. Normal air hoses as being used in work shops or similar hoses are not allowable.

Any chngement of parts will void the NIOSH approval.

Any field modification to this respirator voids the NIOSH approval.

The connection of any pneumatic tool to the approved component will void the NIOSH approval.

Important: Save these operating instruction for future reference

Not for use in atmospheres immediately to life or health

Air-line respirators can be used only when the respirators are supplied with respirable air meeting with the requirements of CGA G-7.1 Grade D or higher quality

Use only the pressure ranges and hose lengths specified in the user's instructions.

Failure to properly use and maintain this product could result in injury or death

All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations

Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configurations as specified by the manufacturer

Refer to users instructions, and/or maintenance manuals for information on use and maintenance of these respirators

Special or Critical User's instructions. Refer to instruction manual before donning.

S-Special or Critical User's instructions:

The connection of any pneumatic tool to the approved component will void the NIOSH approval

T-Piece is not part of the NIOSH approval

Cautions and limitations

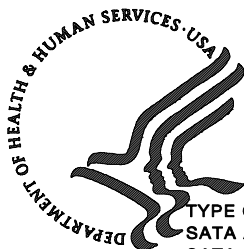
- A - Not for use in atmospheres containing less than 19,5% oxygen
- B - Not for use in atmospheres immediately to life or health.
- D - Air-line respirators can be used only when the respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.
- E - Use only the pressure ranges and hose lengths specified in the user's instructions.
- J - Failure to properly use and maintain this product could result in injury or death.
- M - All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- N - Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configurations as specified by the manufacturer.
- O - Refer to users instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- S - Special or critical user's instructions and/or specific use limitations. Refer to instruction manual before donning.



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TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR
SATA Atmosphere supplied set half mask Part. No. 137547 and
SATA Atmosphere supplied set half mask Part. No. 137745
APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

Respirator Components							Cautions and Limitations ²	
TC-	Protection ¹	Alternate Facepiece	Alternate belt unit (Regulator)		Alternate Hoses			
					25ft	35ft		50ft
				137653	37192	138362		3366
19C-210	SA / CF	X	X	X	X	X	X	A B C D E J M N O S

¹ PROTECTION

SA = Supplied Air
CF = Continuous flow

² CAUTIONS AND LIMITATIONS

- A- Not for use in atmospheres containing less than 19,5% oxygen.
- B- Not for use in atmospheres immediately to life or health.
- C- Do not exceed maximum use concentrations established by regulatory standards.
- D- Air-line respirators can be used only when the respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.
- E- Use only the pressure ranges and hose lengths specified in the user's instructions.
- J - Failure to properly use and maintain this product could result in injury or death.
- M- All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- N- Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configurations as specified by the manufacturer.
- O- Refer to users instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
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